(19) World Intellectual Property Organization

International Bureau



C07C 31/34

English

(43) International Publication Date 25 August 2005 (25.08.2005)

(51) International Patent Classification7:

(10) International Publication Number WO 2005/077873 A1

(21) International Application Number: PCT/US2005/003366

(22) International Filing Date: 4 February 2005 (04.02.2005) (25) Filing Language: English

(26) Publication Language:

(30) Priority Data: 60/541.818 4 February 2004 (04.02.2004)

(71) Applicant (for all designated States except US): HALO-CARBON PRODUCTS CORPORATION [US/US]: 887 Kinderkamack Road, River Edge, NJ 07661 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MAZZELL, Paul, Jr. [US/US]; 1105 Grasmere Court, Aiken, SC 29803 (US). SWINSON, Joel [US/US]; 1407 Ashwood Drive, Evan, GA 30809 (US). JONES, Barry [US/US]; 3521 Stevens Way, Martinez, GA 30907 (US). GRAHAM, Daniel [US/US]; 4137 Meriden Avenue, Martinez, GA 30907 (US).

(74) Agent: BRISCOE, Kurt, G.; Norris McLaughlin & Marcus, P.A., 875 Third Avenue, 18th Floor, New York, NY 10022 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available); AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI. GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR. GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PURIFICATION OF 1.1.1.3.3.3-HEXAFLUOROISOPROPANOL

(57) Abstract: 1.1,1,3,3,3-Hexafluoroisopropanol (HFIP) substantially free of 1,1,1-trifluoroacetone (TFA) can be separated from a mixture containing both compounds by A) catalytic reduction with hydrogen followed by fractional distillation; B) cooling to a temperature at which HFIP freezes and TFA remains liquid; C) forming a high boiling complex comprising HF and TFA followed by fractional distillation; or D) producing HF-free conditions to yield a HFIP/TFA azeotrope followed by fractional distillation. It is emphasized that this abstract is provided to comply with the rules requiring an abstract, which will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims. 37 CFR § 1.72(b).